IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit: 2621

In re application of:
Reed et al.

Confirmation No.: 2492

Application No.: 09/895,063

Filed: June 29, 2001

For: GENERATING SUPER RESOLUTION DIGITAL IMAGES

VIA ELECTRONIC FILING

Examiner: P. Edwards

Date: September 13, 2006

SUPPLEMENTAL RESPONSE AFTER FINAL

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Sir:

Further responsive to the Final Action mailed July 11, 2006, applicants note as follows:

REMARKS

Examiner Edwards telephoned the undersigned today, noting that the Amendment filed September 11 did not place the application in condition for allowance, because claim 40 remains pending, and was rejected over art.

The undersigned apologized for the confusion –careless reading of the Action, and indication of claim 40 as "objected-to" on the cover page – led the undersigned to assume that overcoming the "objection" (i.e., claim 40 is duplicative of another claim) would make the claim allowable. The rejection of the claim on art was not noted.

Applicants respectfully traverse the rejection of claim 40 over Messing and Rhoads.

In Messing, the "reference" by which the low resolution images are aligned is one of the captured image frames, itself. He explains:

> One image from the low resolution sequence of images is selected to be the reference image. This is typically the first image but the reference image may be another image, if desired. .... In other words, the techniques typically use the coordinate system from the low resolution reference frame from which to define the high resolution reference frame.[1]

Thus, in the sequence of images shown in Messing's Fig. 2, first frame 44 comprises the "reference frame."[2]

Global motion between each of the following low resolution images, and the first "reference" is then determined.[3]

Claim 40, in contrast, requires that "*each of* [the low resolution images] *contains a reference signal.*" Messing doesn't work that way; the reference signal is defined by reference to a single one of Messing's low resolution images.

Moreover, in Messing, there is no "reference" until an image is captured. Indeed, it is the captured frame of the first image that defines the reference. In contrast, claim 40 requires that the reference signal comprises a signal "*encoded as part of an object being imaged.*" Messing has no teaching on such point.

While reference is made to Rhoads as curing Messing's deficiencies, applicants respectfully submit that there is no compelling motivation for an artisan to abandon the

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1 Messing, col. 1, lines 53-56 and 62-65.
2 Messing, col. 3, lines 22-23.
3 Messing, col. 2, lines 66-67.

first-captured-frame-as-reference approach taught by Messing, and instead substitute a reference signal that is part of the object being imaged. Nor is there any teaching or suggestion that would have led such an artisan to modify Messing so that each of the captured low resolution images contains a reference signal. Accordingly, applicants respectfully submit that an artisan would not have found it obvious to adopt selective teachings from Rhoads' patent (which is not in the field of compositing low resolution images into a high resolution image) as a basis for modifying Messing so as to yield the arrangement of claim 40.

While the Office need not consider claim amendments after Final, claim 40 is unchanged since its presentation in April. Accordingly, the Examiner is requested to fully consider the merits of the foregoing despite the after-final status of the application.

Favorable reconsideration is solicited.

Respectfully submitted,

Date: September 13, 2006

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